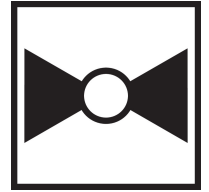




5-year warranty

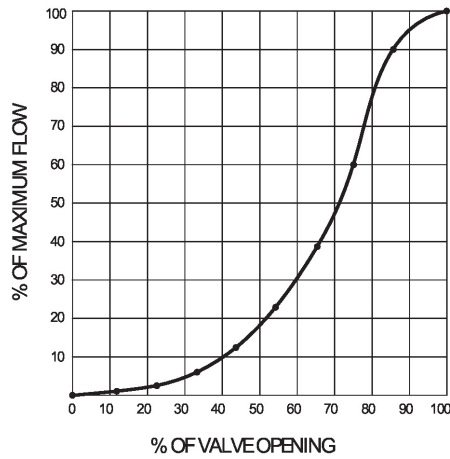


Technical data

Functional data	Valve Size	4" [100]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	-22...250°F [-30...120°C]
	Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
	Close-off pressure Δps	200 psi
	Flow characteristic	modified equal percentage
	Servicing	maintenance-free
	Rangeability Sv	10:1 (for 30...70° range)
	Flow Pattern	2-way
	Leakage rate	0%
	Controllable flow range	90° rotation
	Cv	600
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
Materials	Valve body	Ductile cast iron ASTM A536
	Body finish	epoxy powder coating (blue RAL 5002)
	Spindle	416 stainless steel
	Spindle seal	EPDM (lubricated)
	Seat	EPDM
	Pipe connection	for use with ANSI class 125/150 flanges
	Bearing	RPTFE
	Disc	304 stainless steel
Gear operator materials	Gears - hardened steel	
Suitable actuators	Non-Spring	(2*GMB(X)) DRB(X) PRB(X)
	Electrical fail-safe	PKRB(X)

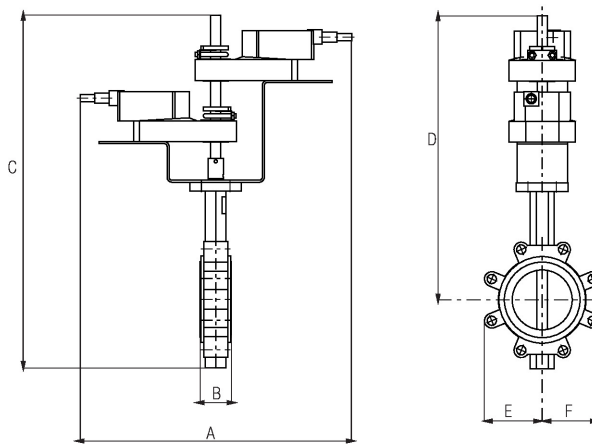
Product features

Flow/Mounting details



Dimensions

Dimensional drawings



Valve with 2*GK/2*GM Actuator

Type

DN

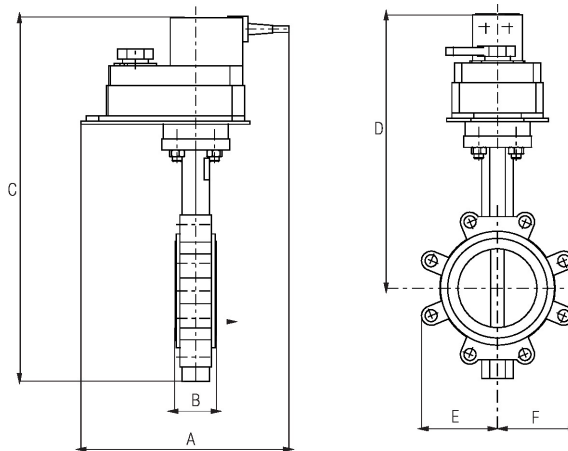
Weight [kg]
[kg]

F6100HD

100

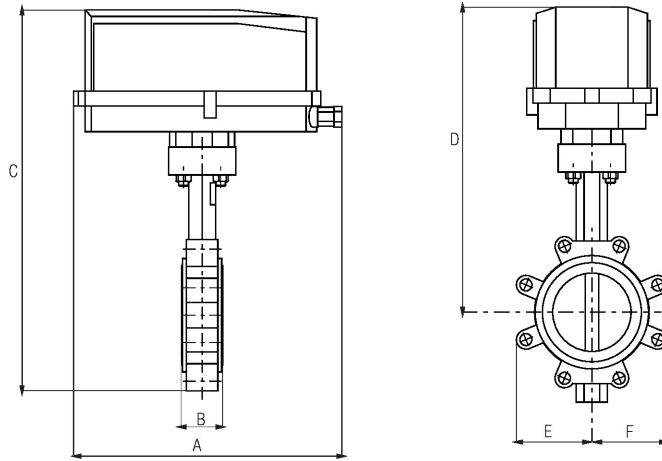
5.7

A	B	C	D	E	F	Number of Bolt Holes
17.9" [454]	2.0" [52]	22.8" [578]	18.5" [470]	3.9" [100]	3.9" [100]	8



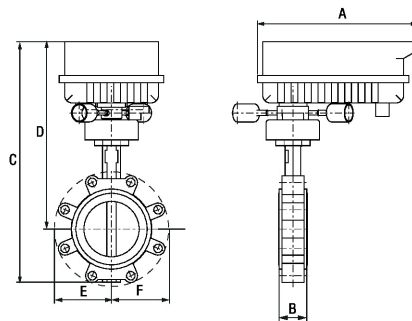
Valve with DK/DR Actuator

A	B	C	D	E	F	Number of Bolt Holes
11.3" [286]	2.2" [56]	17.0" [433]	13.0" [331]	4.3" [110]	4.3" [110]	8



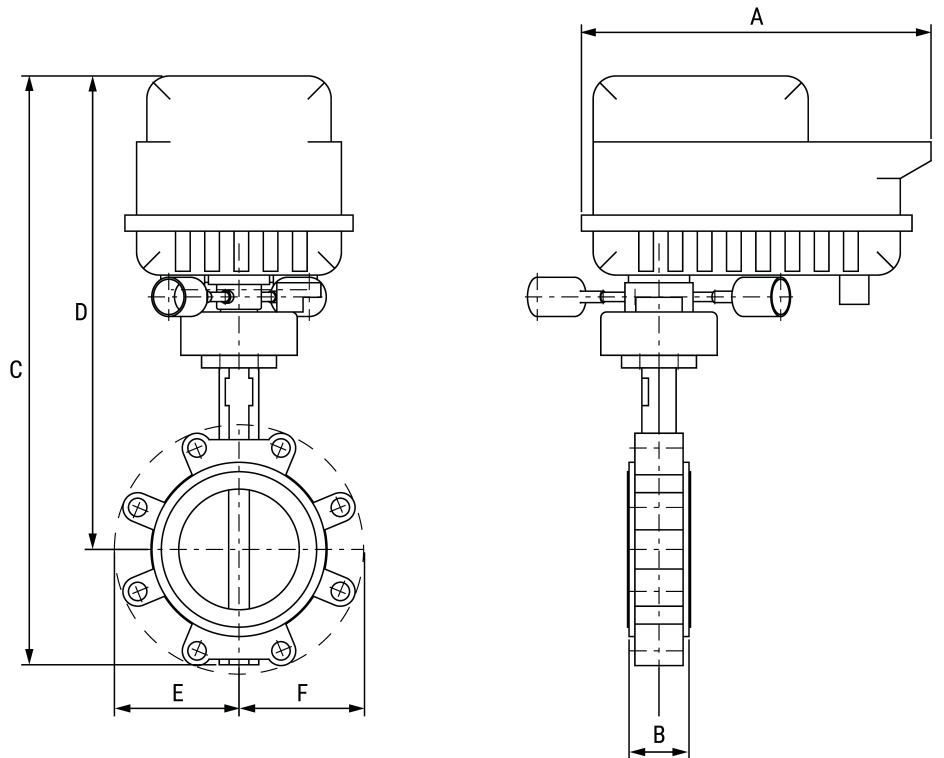
Valve with DKR..N4, DR..N4 Actuator

A	B	C	D	E	F	Number of Bolt Holes
14.1" [358]	2.1" [54]	19.0" [483]	15.2" [387]	4.3" [110]	4.3" [110]	8



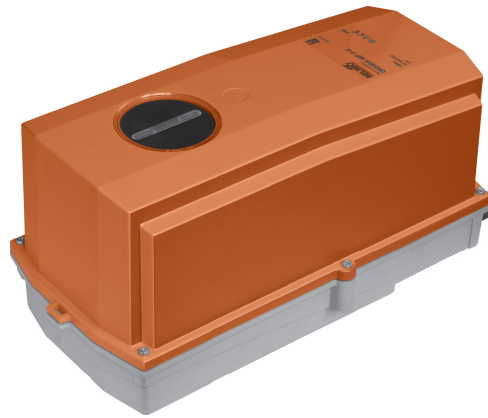
Valve with PRB(X) Actuator

A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	2.1" [54]	17.9" [454]	13.9" [354]	4.3" [110]	4.3" [110]	8



Valve with PKR Actuator

A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	2.1" [54]	20.0" [509]	16.2" [411]	4.3" [110]	4.3" [110]	8



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	12 W
	Power consumption in rest position	3 W
	Transformer sizing	21 VA (class 2 power source)
	Electrical Connection	Screw terminal (for 22 to 12 AWG wire)
	Overload Protection	electronic throughout 0...90° rotation
Functional data	Operating range Y	2...10 V
	Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Input Impedance	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for On/Off
	Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
	Options positioning signal	variable (VDC, on/off, floating point)
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Direction of motion motor	selectable with switch 0/1
	Manual override	under cover
	Angle of rotation	90°
	Running Time (Motor)	35 s / 90°
	Running time motor variable	35...120 s
Noise level, motor	45 dB(A)	
Position indication	Mechanically, 5...20 mm stroke	
Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	UL Enclosure Type 4X
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient temperature note	-40...50°C for actuator with integrated heating
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Materials	Housing material	Die cast aluminium and plastic casing

Accessories

Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Type
	Battery backup system, for non-spring return models	NSV24 US
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
	Feedback potentiometer 140 Ω add-on, grey	P140A GR
	Feedback potentiometer 5 kΩ add-on, grey	P5000A GR
	Feedback potentiometer 1 kΩ add-on, grey	P1000A GR
	Feedback potentiometer 2.8 kΩ add-on, grey	P2800A GR
	Feedback potentiometer 500 Ω add-on, grey	P500A GR
	Feedback potentiometer 10 kΩ add-on, grey	P10000A GR
	Auxiliary switch 1 x SPDT add-on	S1A
	Auxiliary switch 2 x SPDT add-on	S2A
	Connection cable 16 ft [5 m], A: RJ11 6/4 ZTH EU, B: 6-pin for connection to service socket	ZK1-GEN
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Service tools	Description	Type
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

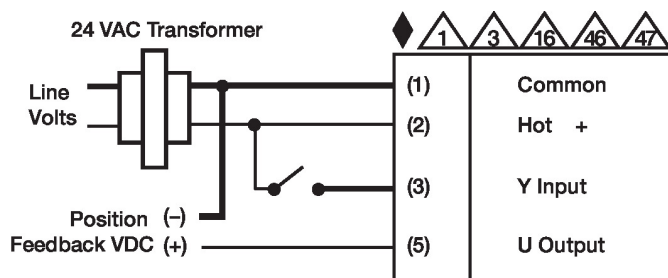
Electrical installation

INSTALLATION NOTES

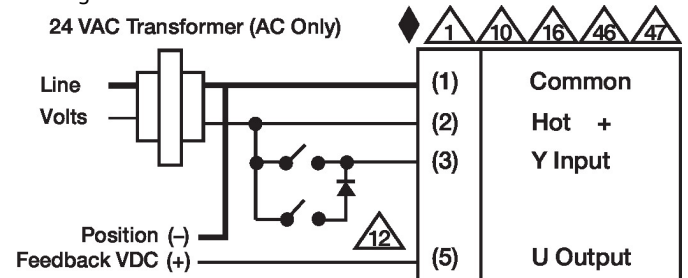
- Provide overload protection and disconnect as required.
- Actuators may also be powered by DC 24 V.
- Only connect common to negative (-) leg of control circuits.
- A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
- IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- Actuators are provided with a numbered screw terminal strip instead of a cable.
- Meets cULus requirements without the need of an electrical ground connection.
- Warning! Live electrical components!**
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

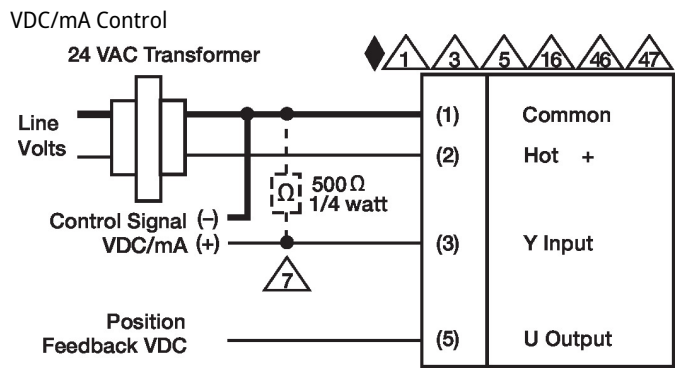
Wiring diagrams

On/Off



Floating Point





Dimensions